OCT 23 1919

THE BOSTON Medical and Surgical JOURNAL

OFFICIAL ORGAN of THE MASSACHUSETTS MEDICAL SOCIETY and of THE NEW ENGLAND SURGICAL SOCIETY

$6 per Annum, 15c per copy
Vol. CLXXXI, No. 16

THURSDAY, OCTOBER 16, 1919

Published weekly in Boston, at 126 Massachusetts Avenue

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Address.

THE WORK OF RED CROSS ORGANIZATIONS IN RELATION TO THE PREVENTIVE MEDICINE OF THE FUTURE.*

BY SIR ARTHUR NEWSHOLME, K.C.B., M.D.

IT is difficult to give, as I am invited to do, in brief space and without the detailed reports of proceedings in which I took part, a clear conception of the conclusions reached at the extremely important International Conference of Red Cross Societies which was held in Cannes during April of this year.

I shall endeavor, however, to state the conception which gave rise to the conference and to give some of the conclusions reached by the experts in a number of departments of medicine on which are being based the initial steps for the organization of a new departure in Red Cross work.

It is unnecessary to remind actual Red Cross workers of the vast amount of beneficent work, rendered possible by the gifts of possibly half the American population, which has been carried out by your agencies in the various belligerent countries. The record of saving life, of alleviation of suffering, and in other instances of prevention of greater suffering, is one calling for gratitude and congratulation. This work has been rendered possible by an unrivaled combination of trained and relatively untrained workers. The trained workers were indispensable; but without the invaluable assistance of intelligent, previously untrained, voluntary workers, a vast mass of suffering would have been left unalleviated and unrelieved.

This work in the main has been directed toward the healing of the sick and wounded, but not entirely so; for most interesting and valuable work has been done among the civilian population of the belligerent countries, in providing medical assistance, in special work for the treatment of tuberculosis, in securing medical assistance and advice for mothers and their children, and in caring for those who have been rendered homeless by ruthless war. In America, also, Dr. Clark informs me that around military camps in States in which public health administration is imperfect, an organization has been evolved, through coöperation between the Central Public Health Service and the American Red Cross, by means of which territories about camps have been "cleaned up," the risks of malaria and other communicable diseases, including venereal diseases, have been minimized, a good milk supply assured, and elementary sanitation established. It is evident, therefore, that already the

* An address delivered at American Red Cross Headquarters, Washington, D. C., May 2, 1919.

Red Cross, when local sanitary arrangements were imperfect or in abeyance, has taken upon itself the burden of the emergency preventive measures as well as of measures of relief.

In so doing it has acted wisely. Preventive work is always more productive in results than relief work. It is also more economical. It is wiser as well as more humane to erect a parapet along the top of a dangerous cliff than to provide an ambulance at its base.

I do not wish, however, to give countenance to the notion that prevention and treatment of disease must be regarded as antitheses. The two are parts of a whole and not distinct and separate. This may be illustrated by two of the most serious diseases to which humanity is subject, tuberculosis and syphilis. Of these, tuberculosis is probably the chief producer of dependent widows and orphans; while syphilis, on the authority of Sir William Osler, must be regarded as third among the killing diseases. For the prevention of both of these diseases treatment forms an indispensable preventive measure. Every arrangement conducing to the comfort or recovery of the tuberculosis patient diminishes the risk of massive infection in his family; and the prompt treatment of syphilis by arseno-bensol preparations is the most effective means for securing his immediate disinfection as well as his progress toward cure. And even when the elementary personal infection is absent, it can be argued with justice that the prompt and efficient medical treatment and nursing of the sick not only diminishes the duration of individual disability, but prevents the impoverishment and enfeeblement of other members of the same family.

But for an increasing proportion of the total sickness of humanity, total prevention is now possible, and I need scarcely cite the almost complete disappearance of typhus in western nations in peace time, the rapid decline of enteric fever, and the improvement in regard to a large number of other diseases. The number of preventible diseases is being steadily increased, as investigation progresses, and as our knowledge of the already ascertained laws of health increases and becomes disseminated among the general population.

It was, therefore, a happy inspiration of Mr. Davison, the President of the American Red Cross, which led to his calling together the international conference of Red Cross Societies at Cannes, with a view to considering means by which the worldwide activities of Red Cross workers might be utilized for the prevention of illness as well as for the treatment of sick and wounded mankind. It is a vision of the future which, I think, will have a great influence on the welfare of mankind, if—as I am confident will be the case—the conception fires the souls of the multitude of Red Cross workers and contributors in every civilized country, and leads them to determine against demobilization of their forces, and to continue their beneficent activities against the horrors of peace, which, in the aggregate, are even more serious to mankind than those of war.

The statement that the devastations produced by disease in times of peace are even greater than the loss of life from war may be illustrated by the experience of England and Wales. In the four years, 1911-14, immediately preceding the World War, 2,036,466 persons died in England and Wales, while, according to official figures, the total loss of men during the 4¼ years of war, was 835,743, including 161,800 presumed dead. The war figures give the entire loss for the British Empire; but it cannot be far from the truth to state that war on the gigantic scale of the war from which we have just emerged has killed in Great Britain about one-third as many as have died in the civilian population in a corresponding period. I do not lose sight of the fact that a large proportion of the civilian deaths occur in ripe old age, and that 28% of the total civilian deaths occur among children under five, while those destroyed by war are adults and the most virile of our race. But the greater part of the deaths in childhood, as well as in adult life, before old age is reached, are preventible; and in the future will be prevented, given adequate research, intelligent and unsparing application of knowledge already in our possession, and an avoidance of the public parsimony which, in relation to public health, constitutes the most serious form of extravagance. That is the idea which Mr. Davison and his collaborators place before us; and it was to devise plans to this end and to enlist the continued coöperation of all Red Cross workers that the conference was called at Cannes.

The conference held a number of general meetings in which the general policy to be pursued was discussed and then divided itself into

sections dealing with the following subjects: preventive medicine, child welfare, tuberculosis, malaria, venereal diseases, nursing, information and statistics. These sections were not selected as covering the entire group of preventive medicine, but as forming branches of work in which early investigation and action appeared to be most desirable.

But first of all the lines of general policy were discussed.

It is evident that although measures for the prevention of disease constitute a definite governmental function—neglect of which is treason to the communal welfare—even in the more advanced countries our governing bodies have not lived up to their potentialities. In scarcely a single sphere of its work can it be said of any government or of any local authority, that what could be done to prevent disease and to avoid human suffering has been completely accomplished. To say this is merely to express the imperfections of humanity singly, or the greater imperfections of Committees of Councils entrusted with the public purse and the public weal.

There is, and I think always will be, ample scope for supplementation of official work by voluntary workers, for the experimentation in new and promising work which it is so difficult to initiate in official circles, and for the undertaking of necessary work by devoted volunteers when public opinion and officialdom refuse to undertake it.

This disposes of the argument that Red Cross activities in the prevention of disease merely prevent the development of official work. The true object of all voluntary workers is to stimulate official public health work, and when in any sphere the latter is fully developed to welcome the disappearance or reduction of voluntary non-official work, or seek the new means of social help which are always waiting for devoted workers to initiate.

The conference agreed that the new work of the Red Cross would naturally divide itself into two parts: an International Bureau, and National Organizations. The duty of these and their relation to each other will be more clearly seen in the light of experience. The International Bureau in the scheme proposed for the consideration of the conference—which received general approval—would act as a great centre for collecting information on various public health subjects, and for digesting it and subsequently distributing it by means of special publications, or periodical journals, or on application from those requiring specialized information. It would also act as a means of educating the general public on urgent problems affecting its welfare; and it would be utilized as a centre, organizing in less favored communities, missions which would undertake local investigations and remedial work. These surveys and activities would be intended rather as demonstration centres than as permanent organizations, the intention being to withdraw them as soon as the necessary work could be carried on by local Red Cross or other organizations.

It was suggested that the central bureau should comprise a number of branches dealing with epidemic diseases, tuberculosis, venereal diseases, child welfare, nursing, and other subjects, collating and analyzing information and distributing it through the medium of the National Red Cross of each country.

Such a central bureau, it will, I think, be agreed, will be of the greatest value to all social and public health workers, while not clashing with any existing agency.

The proposed organization of Red Cross agencies for preventive work has already received an imprimatur in the draft league of peace; and it would be appropriate that its headquarters should be near if not side by side with the future home of that league. If it receives the full development for which we hope, it will form, perhaps, a chief instrument in securing peace and continued happiness for mankind.

The relation of the central bureau to National Red Cross societies will be one of mutual coöperation. The central bureau will provide information and facilities for national work; the actual work will need to be carried out in each country nationally and in the main from funds supplied by that country.

It is not intended that the National Red Cross shall undertake, much less compete with, work already being carried out either by local authorities or by existing voluntary associations. If, for instance, there is a society concerning itself with child-welfare, or the prevention of tuberculosis, or of venereal diseases, the National Red Cross would naturally give such assistance as it could through its voluntary workers in the special work, while leaving untouched existing arrangements. If no such

societies existed the National Red Cross might advantageously assist in their formation, retiring as soon as the separate organization was working.

In countries in which official and existant voluntary agencies scarcely exist, more active and continued direct work of the Red Cross organization will be called for; in such countries assistance may be needed from the central international bureau.

Evidently there are many points of central and national administration requiring and now receiving fuller and more detailed consideration; and all that need now be said is that it appears to me certain that International and National Red Cross organizations which will concern themselves with the prevention of disease as well as with the relief of suffering will be formed, and that they will have pregnant influence in hastening the reduction of human disease.

The second week's deliberation of the conference at Cannes was filled with meetings of Committees of experts and more formal sectional meetings, at which lines of policy on certain specific subjects were formulated for the later deliberations of Red Cross Societies in Geneva.

It is unnecessary to summarize in detail the scientific recommendations reached in various subjects. It may suffice, as indicating the wide scope of the field of work about to be surveyed, that among the more urgent problems of preventive medicine priority was given to advocacy of combined efforts for the prevention of the major pests of mankind, of the provision of laboratory assistance in the diagnosis of disease, and in securing more accurate vital statistics and improvements in public health legislation.

In child welfare work, the importance of health visiting, of child welfare centres, of an improved midwifery service, and of continuous observation of children under school age as well as scholars was emphasized.

In regard to tuberculosis, stress was laid on the essential point that measures against this disease must embrace the whole of the sick lifetime of the patient, and must include, when necessary, measures for obviating the results arising from the fact that the partially recovered patient commonly is unable to earn an economic wage.

In the prevention of venereal diseases a similarly wide outlook was advocated, including the necessary social and moral as well as medical measures against their spread.

In the preceding brief statement I have endeavored to indicate the main outlines of the proposals considered by the Cannes Conference. My statements are merely those of a participator in the Conference; and it is evident that outside of the momentous decision to endeavor to retain mobilized the forces of Red Cross organizations, and to secure their assistance in the great impending struggle against disease, no final decisions have been made. The growth of the central and of each National organization in the desired direction must necessarily occupy time, though I believe development will be rapid once the great ideal is visualized clearly by Red Cross workers in each country.

I have referred in an earlier part of these remarks to the imperfections of governments, central and local, in the control of disease. These imperfections indicate one of the most promising fields in which voluntary agencies, like the Red Cross, can assist toward greater efficiency. Both local and central authorities are elected by the people themselves and the laws and regulations for the promotion of the public health—and what is even more important, the enforcement of existing regulations—depend for their efficiency on public opinion, which we can all assist in forming. The natural tendency on the part of the social enthusiast who has been disappointed in his efforts at reform is either to retire from the fight or to organize a voluntary organization having the same end in view. This last may sometimes be the best line to pursue, though in that case endeavor should be made to secure friendly relationship with, if not also the active coöperation of the local authority. But often the most hopeful plan is to fight the local elections and to secure the election on local governing bodies of men and women who will give these bodies no peace until the necessary reforms are secured.

If we are to be helpful we must be kindly and charitable in our criticism of local authorities. Nothing has made it so difficult to secure good men and women to undertake the burden of local government as the indiscriminating and uncharitable criticism aimed at those engaged in it. Criticism of members of our central and local governing bodies is not seldom deserved; but critics are too often those who will give no assistance in the work which, with insufficient

knowledge, they villify. When we hear of scandals in administration, let us have a sense of proportion, remembering the grosser corruption evidenced, for instance, in Pepys' Diary, and especially remembering that the best way to remove corruption is by ourselves taking a part in the work of central or local government, or by steadily upholding those who are doing so with integrity.

The onlooker, whether it be on voluntary or on official work for the commercial good, has his duty to perform as well as the worker. It is his duty to make himself acquainted with local conditions and with local administration, even though he takes no part in it. A chief need at the present time is an interested study by every adult of all the phases of local administration in each district; and in my view Red Cross organizations will be rendering inestimable service to the community if they succeed in educating the public conscience to this effect. Increased local patriotism is urgently needed if the prospective fight against disease by the Red Cross Societies is to succeed, and if the further triumphs of preventive medicine within our reach are to be secured. To this end enthusiasm will need to be infused into official public health administration as well as into the work of voluntary agencies; and it is only by developing all the possibilities of our governing bodies as well as of voluntary societies and by securing the closest coöperation between the two that the new ideal of the Red Cross organization can be realized.

Original Articles.

THE TREATMENT OF CARCINOMA OF THE SKIN WITH RADIUM. THE RESULTS IN THE CASES TREATED AT THE COLLIS P. HUNTINGTON MEMORIAL HOSPITAL.

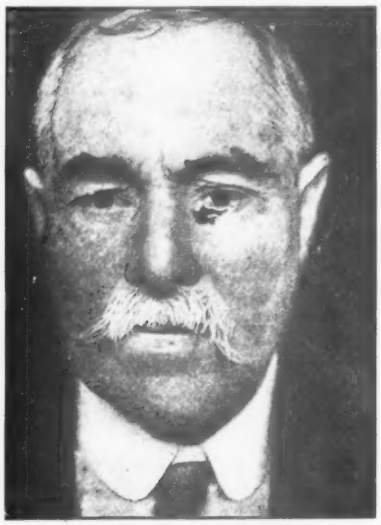
Compiled by Channing C. Simmons, M.D., Boston.
[From the Cancer Commission of Harvard University.]

The following is an analysis of the cases of carcinoma of the skin that have applied for treatment at the Collis P. Huntington Hospital from 1912 to 1916, inclusive. There were 259 cases diagnosed clinically as rodent ulcer, epithelioma, epidermoid carcinoma, or carcinoma, the actual term employed depending more on the individual making the diagnosis than on the type of cell forming the tumor. At one time an attempt was made to remove a specimen for pathological examination from every case, but this was found impracticable as a routine and was abandoned; consequently the diagnosis is clinical in the greater number of the cases. We have pathological reports on 51 cases, however, and have been struck by the fact that a number of cases diagnosed clinically as being of the basal cell type proved microscopically to be prickle cell carcinoma.

The policy of the hospital has been not to use radium in all cases of malignant disease applying for treatment but to advise operation if it seems best in a given case. Patients referred to the hospital are considered as being seen in consultation and advice is given; or, if they are suitable cases, they are accepted for radium treatment. In certain of the milder cases in which the growth is favorably situated, operation gives a better immediate result and a greater hope of permanent cure. In another class of advanced cases operation, to remove the greater portion of the growth, followed by radium treatment, is the treatment of choice. Much can be accomplished by this method in advanced carcinoma of the cheek, for example, in which the upper jaw and orbit are extensively involved. Life is prolonged and the wound made clean even if the disease cannot be completely eradicated. Most of the cases referred to the hospital are suitable for radium treatment and can be divided roughly into two classes,—those in which a permanent cure is to be expected and those in which the disease is extensive and in which radium is used as a palliative measure to retard the rate of growth.

Radium is particularly valuable in the treatment of skin cancer arising about the orbit. Less deformity of the lids results by the destruction of the growth in this manner than by operation, which can always be performed later if the radium treatment is unsuccessful. Operation, in many instances, implies loss of sight of the eye by reason of destruction of the lids and later infection, or the position of the growth makes enucleation necessary. In carcinoma of the foregoing region, as well as on the nose and parts of the cheek, the final cosmetic results following radium treatment are better than those following operation. (Cases 1 and 2.) On the other hand, in some cases, especially where the growth is situated about the ear or on the cheek, operation, followed by a plastic flap or skin graft, gives a better result.

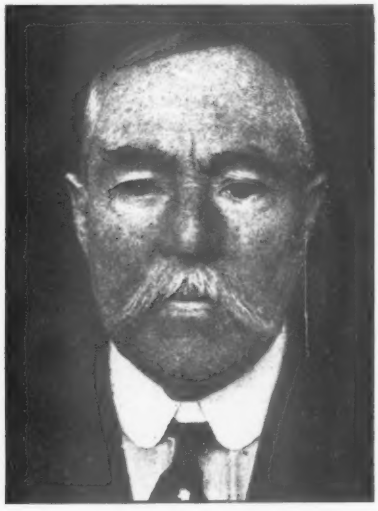
CASE 1. Hospital number, 15.85; male, 71; February 25, 1915. Three years ago tumor on left lower eyelid appeared. Two years ago consulted physician and was given x-ray treatment every two weeks, and these were continued for



CASE 1.—Showing lesion below left eye.

two years, but the growth, although benefited at first, still persists. Examination shows a large indurated area involving the entire left lower lid. Marked conjunctivitis.

Patient received two treatments with radium in May followed by considerable reaction. Further treatment given in June. August, 1915, growth was apparently entirely destroyed. Lit-

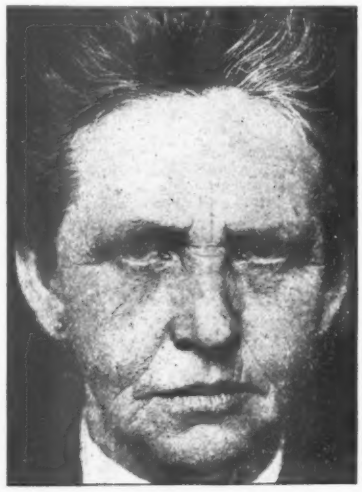


CASE 1.—Showing scar of former lesion on left lower eyelid.

tle deformity of lower lid. In September, 1916, small recurrence. One treatment with radium. One month later this had disappeared. In January, 1916, evidence of recurrence in the scar and radium treatment given. There were other slight recurrences in October, 1916, and February, 1917, both of which were treated with radium. The last treatment was in June, 1917. In May, 1918, no evidence of recurrence. Slight deformity of lower lid.

CASE 2.—Showing rounded growth on lower lid which is drawn downward by the tumor.

CASE 2. Hospital number, 14.110; April 28, 1914; female; aged, 56. Fifteen years previously small wart appeared on right lower lid. Removed it at this time herself. Three years ago wart recurred. Treated with carbolic acid. No other treatment. Examination shows on the lower lid of right eye rounded mass 1 cm. in diameter (see photograph). Some ectropion.



CASE 2.—Showing disappearance of tumor.

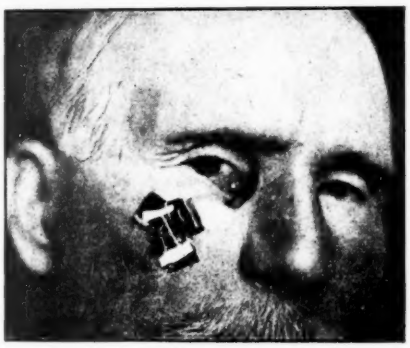
Microscopical examination, small specimen removed. Epidermoid carcinoma.

Patient received two treatments of radium on May 2 and May 5 of 18 and 14 millicuries, steel needle, unscreened. Latter treatment of three

hours. Some slight reaction following the treatment. Six weeks later the growth had entirely disappeared, and the resulting ulcer healed. Four years later no evidence of recurrence.

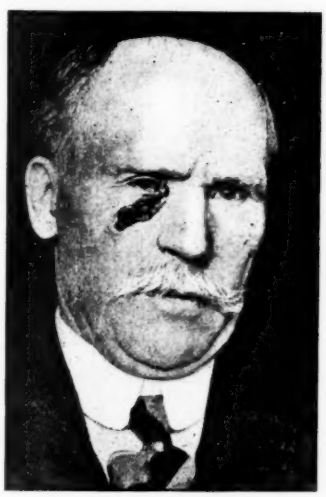
A plastic operation can also be performed for ectropion or deformity of the nose after the destruction of the growth by radium, but should not be attempted until all inflammatory reaction from the radium has subsided and sufficient time has elapsed to make the possibility of recurrence remote (Case 3). Carcinoma arising on the tip of the ear responds very slowly to radium and operation is usually the treatment of choice, the resulting deformity being less noticeable than would be expected.

Case 3. Hospital number, 14.11; male, 62. January 12, 1914. Fourteen years ago received



Case 3.—Showing method of application to persistent tender portion of the edge, protecting new-formed skin.

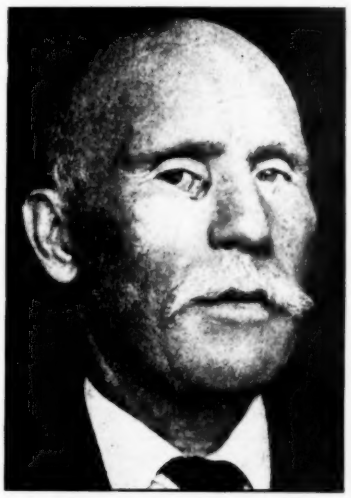
a blow on the right side of the face. One year later small sore appeared there, which was curetted. This only partially healed. Three



Case 3.—Appearance of growth before treatment.

years later sore excised and then remained well for five years. Two years ago it broke down again, and was removed, but did not heal. During the past summer has received several x-ray treatments without improvement.

Examination shows extending from the inner canthus right eye to malar bone an eliptical ulcerating area 5 x 1½ cm. in diameter. The borders and base are typical in appearance of epidermoid carcinoma.



Case 3.—Showing condition of scar at inner canthus of right eye.

Pathological report of small section of growth removed for examination,—suspicious of carcinoma.

In January, February, March, and April, patient received eleven radium treatments with marked improvement. Growth slowly closed over, and July, 1914, tumor had been entirely destroyed. There was marked ectropion of lid and opening into the antrum. In March, 1915, there being no evidence of recurrence, plastic operation was performed at the inner canthus. February 15, 1918, no evidence of recurrence.

All patients should be warned of the possible depilatory effects of the radium, as the beard, eyebrows, or eyelashes may be unavoidably destroyed. Treatment inside the buccal cavity even will often destroy the beard. In treating carcinoma in the region of the orbit, they should also be warned of the probability of conjunctivitis. A Wassermann test should be taken in all cases in which there is the slightest suspicion of syphilis, as the clinical diagnosis between rodent ulcer and syphilis is at times difficult. It must not be forgotten, however, that carcinoma can arise in a syphilitic ulcer, or that the two conditions may be co-existent and have no relation to each other.

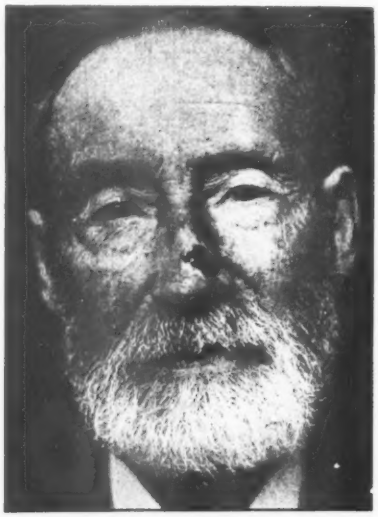
We have made it a rule not to treat carcinoma of the lip with radium except in cases where

operation is contraindicated on account of diabetes, high blood pressure, or the extent of the growth, as we consider operation the only proper treatment. We have seen cases in which a small carcinoma of the lip had been entirely destroyed by radium develop hopeless carcinoma in the glands of the neck a few months later. Keratosis of the lip, the precancerous condition, yields readily to radium, which is the treatment of choice.

Methods of Treatment. The actual method of applying the radium for treatment varied greatly as to the type, situation, and extent of the growth. The usual procedure in the small superficial tumors in accessible regions was to fasten the glass tube containing the emanation, which was in turn enclosed in a steel needle, to the top of a metal cone 1 cm. in height, the diameter of which was slightly larger than the growth. The cone has a broad flange on the bottom which protects the surrounding skin from the action of the rays. The cone with the radium attached was then fastened over the growth and allowed to remain in place for from one-half to two hours. The usual dose was from 20 to 50 millicuries, although heavier treatments have recently been used. In growths about the scalp or orbit, sheet lead was also used as a protection to prevent loss of hair or conjunctivitis, which, in spite of all precautions, often follows the treatment of carcinoma of the lids. The average small growth usually disappeared in from two to four treatments, often in one, but the resulting superficial ulcer heals slowly. After the first treatment, patients report once in two weeks for observation and further treatment, as necessary. We have found that the best method of treating the superficial ulcers is to instruct the patient to bathe them once or twice daily with a solution of peroxide and water, equal parts, and keep them covered with white vaseline or other bland ointment, on a piece of compress cloth. (Case 4.)

CASE 4. Hospital number, 16.198. May 16, 1916: male, 86. Present growth appeared on the nose about two years ago. Plaster applied at that time without improvement. One year ago x-ray treatment, with slight temporary improvement. Examination: Shallow, irregular ulceration 1 x 2 cm. in diameter on the left side of the nose. (See photograph.)

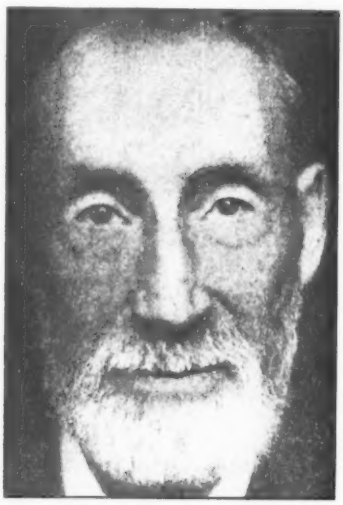
Patient received four treatments with radium during May and June. Six weeks after first treatment ulceration was entirely healed. June, 1918, two years from first radium treatment, no evidence of recurrence.



CASE 4.—Showing epidermoid carcinoma of nose.

In the large superficial growths the steel needles containing the radium emanation were usually laid directly on the growth in a series around it a short distance inside the edge. The bare glass tubes are also, at times, used in a similar manner, or raised up ½ cm. from the surface on a piece of gauze.

Fungoid growths, where there was considerable tumor tissue, were often treated by imbedding the glass tube containing the emanation directly in the tumor and leaving it *in situ*. One or more tubes containing from 5 to 12



CASE 4.—Showing former lesion entirely healed.

millicuries were usually embedded in this manner.

Emanations in a small glass sphere were at

times used in treating growths on the eyelids.

In large growths on the cheek which have involved the bone and infiltrated the antrum much may be accomplished by removing the tumor by operation with the knife, curette, and actual cautery. A tube of radium may be introduced into the cavity thus formed in the gauze packing at the time of operation and left in place for from 12 to 48 hours, depending on the amount used. The deformity following these operations on the upper jaw is surprisingly little, considering their extent. Further radium treatments are given as indicated. The same procedure may be followed after eventration of the orbit for cancer, or, if there is a chance of all the growth having been removed, the radium treatment may be delayed until a recurrence appears.

All cases are requested to report at the hospital regularly for observation whether they need treatment or not. Cases which do not report are followed up at the end of six to twelve months from their last visit to determine their condition.

The 259 cases, for convenience of study, were divided into the following groups: Cancer of eyelids and about the orbit, 52 cases; cancer of the nose, 79 cases; cancer of the cheek, 71 cases; cancer of the forehead, 27 cases; cancer about the ear, 24 cases; miscellaneous cancer (hands, feet, etc.), 6 cases.

Of these cases 201 (77%) had previously received some form of treatment. In some the growth had been destroyed but had recurred, while in others treatment had had little or no effect. Many patients had drifted from one physician to another and had tried several different remedies. Many of the methods of treatment employed are well recognized and it must be borne in mind that we only saw the unsuccessful cases and have no means of judging the numbers cured. A list of the more common methods employed is given below.

X-ray	61	cases
Violet light	4	"
Finsen light	1	"
Radium	11	"
Electricity	3	"
Operation	67	"
Cautery	13	"
Freezing (liquid air, etc.)	6	"
Cancer pastes	27	"
Ointments	44	"
Treated by many remedies	49	"
No previous treatment	56	"
No data	2	"

The cases received treatment at the hospital as follows:

Treated with radium	201	cases
Treated by operation	28	"
Treated with x-ray	4	"
No treatment	26	"

Case 5. Hospital number, 15.163; May 25, 1915; female; aged, 77. Twenty years ago, following a bruise on the nose, a wart appeared,

Case 5.—Showing carcinoma basocellulare of nose.

which patient says she used to cut with knife. One year ago, following irritation, growth increased. Consulted local doctor, who gave her an ointment. This had no effect on the wart, which gradually increased in size to the present

Case 5.—Showing marked improvement since radiation.

time. Examination shows nose occupied by a mass of hard ulcerating new growth, 4 x 5 cm. in diameter (see photograph).

Pathological report of specimen removed for examination: Epidermoid carcinoma.

During June, July, and August, patient received 17 treatments with radium. Most of these, however, were small and were applied in

CASE 5.—Showing extension of carcinomatous area over face, involving the entire nose, upper lip, greater portion of cheeks and eyelids.

steel needle, without screening, to various portions of the growth. By September, 1915, condition was very much improved (see photograph). Had two heavy treatments in October and November, 1915, but during this time the growth rapidly increased in size and continued to spread, involving the nose, cheeks, and antrum. Patient died June 28, 1916.

Radium Treatment. Of the 201 cases treated with radium, 171 were cases in which complete destruction of the tumor and healing of the ulcer were to be expected, in other words, a "cure," although we avoid this term in speaking of carcinoma. A certain number of cases, clinically indistinguishable, proved to be very resistant to the radium, and the tumor, although destroyed in some parts, tended to extend at the periphery in spite of heavy treatments (Case 5). Of the other 30 cases treated with radium complete destruction of the tumor was not to be expected. In 15 the disease was so advanced radium was used only as a palliative measure, and, in the other 15 cases an insufficient amount of radium was used to accomplish any result, as the patients failed to report regularly for treatment. In 124 of these 171 cases, or 72.5%, the growth was destroyed and the ulcer healed; in other words, an "immediate cure" was obtained. In 36, or 21%, no benefit was noted following treatment, and in 11, or 6.5%, there was only temporary improvement. Five of the cases in this last group were later operated upon.

TABLE I. IMMEDIATE RESULTS, RADIUM TREATMENT.

"Immediate cure"	124	cases	72.5%
No improvement	36	"	21.0%
Slight improvement	11	"	6.5%
Insufficient treatment	15	"	
Too advanced for much relief	15	"	

No reason could be found for the lack of response to treatment in the 36 cases in which no improvement occurred. There was no relation to the age, sex, or position of the growth. In some cases the growth was extensive, but no larger than in others which yielded readily to radium. The type of cancer made little difference in the cases in which a specimen was available for study, although cancer diagnosed microscopically as being of the basal cell variety was slightly more favorably influenced by radium than the prickle cell type.

TABLE II.

	EPIDERMOID OR SQUAMOUS CELL CANCER	BASAL CELL CANCER OR CANCER	PAPILLARY CANCER	ADENOCARCINOMA
Immediate cure	6	9	2	1
Slight improvement	2	12	0	0
No improvement	11	5	0	0

Some of the growths which did not yield readily to radium were small, and while there would be slight improvement in the center of the ulcer following treatment, the process would extend at the periphery despite heavy doses.

Remote Results. Of the 124 cases in which an immediate cure was effected by radium, 121 have been kept under observation for one or more years. Twenty-five cases, or 20.1%, have recurred. On the other hand, the recurrence was small and in 13 disappeared after one or two light radium treatments. The recurrences usually appeared about the periphery of the scar (Case 6).

CASE 6. Hospital number, 14,133; male, 74; May 25, 1914. Warty growth on the nose near the inner canthus appeared 15 years ago. Fourteen years ago consulted physician, but advised no treatment. One year ago x-ray treatment advised. Has received x-ray and radium treatment for past two years; amount of radium not known.

Examination shows the inner canthus of the

right eye ulcerated, area 1 x 1 cm. in diameter; base soft, edges raised and indurated. Considerable conjunctivitis.

Patient received one treatment of 16 millicuries of radium for one hour; no screening. Six weeks later lesion entirely healed. Scar soft. During the next three years patient came to the hospital several times for treatment of small keratoses on portions of the face, which yielded readily to radium treatment. In June, 1918, there was no evidence of recurrence of growth at the inner canthus or on the cheeks.

TABLE III. END-RESULTS.

No recurrence 1 year	8 cases	
No recurrence 2 years	14 cases	
No recurrence 3 years	51 cases	
No recurrence 4 years	22 cases	
Recurrent cases	26 cases	21.4%
Result unknown	3 cases	

(Of the 26 recurrent cases, 13 yielded readily to further light treatment.)

It may be stated, therefore, that in carcinoma of the skin suitable for radium treatment in 72.5% of the cases an immediate cure is to be

CASE 6.—Showing ulceration of inner canthus of right eye. The central necrotic portion is probably due to the radium application.

expected and of these 90% will remain free from the disease or if a recurrence does take place, it will yield readily to further light treatment. We consider, however, that in cases of epidermoid carcinoma in which the growth can be removed easily without marked resulting deformity, or cases in which metastases are likely to occur, operation is the treatment of choice.

Results of Operative Treatment. Of the 28 cases treated by operation, 26 were alive and free from recurrence one or more years later. Ten of these cases were of carcinoma about the orbit so extensive that removal of the orbital contents, together with the lids, was considered

CASE 6.—Showing scar tissue replacing rodent ulcer at inner canthus of right eye.

advisable. Nine of these cases are still free from recurrence. Five of the cases were operated upon as radium failed to destroy the disease.

LOSS OF SIGHT FROM RETROBULAR NEURITIS DUE TO POSTERIOR ACCESSORY SINUS DISEASE, WITH REPORT OF 17 CASES.*

BY LEON E. WHITE, M.D., BOSTON.

AFTER reading Sluder's masterly book, "Headaches and Eye Disorders of Nasal Origin," one hesitates to enter this field. I believe, however, the subject well warrants further elucidation; for in spite of the brilliant writings of Onodi, Loeb, Knapp, Holmes, deSchweinitz, Posey, Hajek, Birch-Hirschfeld, Killian, deKleyn, Berger, van der Hoeve, Halstead, Stark and many others, the subject has not, I think, been sufficiently comprehended. The cases are so rare that one seldom sees enough of them to know what to expect. The usual opinion seems to be that the seat of the trouble is determinable on a casual nasal examination. Pus, polypoid tissue or caries was formerly looked for, but now we recognize the importance also of a thickened or hypertrophied membrane —hyperplasia, as it is designated. Vail defines this as a "rarefying osteitis associated with inflammatory swelling and fibrous thickening of

* Read before the American Laryngological Rhinological and Otological Society at New York City, on June 6, 1919.

the mucous membrane lining the accessory sinuses. It is brought about, according to Delafield and Prudden, by long continual hyperemia. Examination of the nose is negative where the hyperplasia does not involve the middle turbinate. It is especially to this type of case that I wish to call attention.

The more one studies the structures surrounding the sphenoidal sinuses, the more one is impressed with the importance of a thorough comprehension of the pathological conditions found here. These sinuses vary greatly in size and position, even in the same individual. They may extend outward and backward into the greater wings of the sphenoid to the Gasserian ganglion and have a capacity of 12 cubic centimeters or more. The pituitary body, chiasm and optic nerve are in relation to the superior wall, while externally lie the optic, abducens, oculomotor, trochlear, ophthalmic and maxillary nerves, the cavernous sinus, the internal carotid artery, and the dura of the middle fossa. "In some specimens," Killian says, "the blood circulating in the cavernous sinus bathes the whole roof as well as the lateral walls." Bearing these relationships in mind one can readily see what effect an inflammatory process here might have on these structures. Cases of brain abscess and cavernous sinus thrombosis from sphenoidal sinus disease do occur, but fortunately are rather rare complications, while the affection of the adjacent nerves, such as impairment of vision and intense neuralgia, are only too frequent.

As to the vulnerability of the optic nerve much research work has been done. For instance, Francis and Gibson made a study of sixty specimens, in one-third of which the optic nerve was separated from the sphenoidal sinus by a paper thickness of bone measuring less than 1/100 of an inch. This frailness was well demonstrated when I was removing the lining of a sphenoidal sinus in the dissecting room recently. This bone, in a comparatively fresh subject, was so fragile that it came away with the lining, thus exposing a considerable area of dura. It is difficult to conceive how an inflammatory process could go on in a sinus of this type without causing serious damage. The wonder is that so few complications arise.

deKleyn and Gerlach made a study of the optic nerve in a case of old sphenoidal sinus disease, and found circumscribed infiltration opposite the sinus. The same capsular diplococci were found in this infiltrate as in the mucosa of the sinus.

As to the cerebral complications from sphenoidal sinusitis, I have seen but one case, but in 1905 Dr. St. Clair Thompson gave a brief history and autopsy findings in 42, all but 2 of which were collected from previously reported cases. Most of these ran a very rapid course (as illustrated by my case), and while the findings as to the eyes were meager, they were most interesting as showing the effect on the optic nerve of disease in the sphenoid.

CASE 38 of the series is as follows:

"Male, 78; two and one-half years before death eyesight became suddenly impaired and subsequently totally lost from double optic neuritis and post-neuritic atrophy."

The autopsy showed complete destruction of the walls of the sphenoid.

In *twelve* of the *forty cases* loss of vision with or without changes in the fundi are mentioned, thus:

In CASE 1. Sudden blindness in right eye. Optic disc cloudy.

CASE 8. Diminution of vision on one side.

CASE 15. Three weeks before admission, failing eyesight was noted.

CASE 16. Congested optic discs.

CASE 17. (Reported in full, it being Dr. Thompson's own case). Had complained that everything was misty before him. Both optic discs were slightly hazy.

CASE 21. (Also Dr. Thompson's patient.) Had double optic neuritis.

CASE 24. Complained of dim sight five days before admission to hospital.

CASE 25. Had pain in left eye with failing of sight 2 days later "as from mist before the eye." Complete blindness followed. The fundus showed dilated veins and edema of papilla. Five days later the right eye was similarly affected.

CASE 27. Gave a history of pain in the left eye and diminished vision on that side.

CASE 33. Had scotoma and diminished vision in both eyes.

CASE 35. Had diminished vision ending in complete blindness.

CASE 36. Had unilateral loss of vision.

In 1900 Miller reported two fatal cases from sphenoidal sinus disease, preceded by sudden and complete loss of vision.

Dr. D. W. Greene reported a fatal case of unrecognized empyema of the right sphenoidal sinus, with loss of vision in the right eye. On autopsy "the blood vessels (veins in particular) occupying the floor of the right anterior and middle cerebral fossae were engorged with blood; the overlying dura was boggy and opaque and the anterior clinoid processes, together with the superior wall or roof of the right sphenoid, were of a grayish red color, almost black in places, and necrotic. The right ophthalmic vein and artery, the right optic nerve and other minor structures occupying this position about the right clinoid process, were agglutinated and embedded in a mass of inflammatory lymph."

Chisholm in 1882 reported two instructive cases of blindness from malignant growth in the sphenoid. In the one,—a boy of seven—almost complete loss of sight came on within two weeks in the right eye and some loss of vision in the left. There was pallor of both discs. A year later the boy was totally blind in both eyes and both discs were white. In the other case,—a physician—loss of vision came on in the right eye several months after the pain started in that side of the head. The disc was pale. Left eye had normal vision at first examination but five months later it was so poor that he could see only the outline of large objects. Both discs were white.

Dombrowski also has reported an interesting case of retrobulbar neuritis caused by carcinoma of the sphenoid. At first there was slight blanching of the disc and restriction of the visual field in one eye. Later complete loss of vision in one eye with optic atrophy and commencing loss of vision in the other.

The case of Wood and Wallis is instructive as it shows the difficulty in differentiating cases of retrobulbar type from those where the optic neuritis is of cerebral origin. Their patient had defective sight for two years in the left eye with vision for hand movements and the right was also somewhat affected. Vision 6/9 with marked papilloedema. There was pus in the nose. The removal of the middle turbinates and opening of the sphenoids brought about normal vision right and nearly normal left.

The writers up to ten or twelve years ago laid great stress on the intimate relation of the optic nerve to the accessory sinuses, and seemed to feel that pressure was the all important factor. The literature showing the growing comprehension of toxaemia and hyperplasia is most interesting.

Krauss was one of the first to express the toxaemic view. He said in 1909 that "retrobulbar neuritis is generally supposed to be due to an extension of the inflammation from the sinuses to the optic nerve, but the rapidity with which the retrobulbar neuritis disappears after the evacuation of the pus from the opened sinuses is often a source of surprise and would indicate that the neuritis was due rather to a local toxaemia than to an inflammatory process. It is readily conceivable that, soon after the supply of toxins through the lymphatics to the nerve fibres ceases, the natural recuperative forces are set to work. Another reason for the supposition that we have toxaemia to deal with is that the macular fibres are selected for specific action by the inflammation." He cites the case of a patient who had pain in the right eye accompanied by very dim sight and a constantly present black spot. There was faint haziness of the retina and contraction of the visual fields. There was an extreme deviation of the septum to the right, and pus was found about the middle turbinate. A rapid cure was effected by resection of the septum and the opening of the ethmoid cells.

Teillais, in 1908, reported a unique case where toxaemia seemed to play the leading rôle. The extraction of the molar tooth was followed by an acute infection of the left maxillary antrum and orbital cellulitis which spread to the neighboring sinuses, causing blindness and optic atrophy of the left eye and neuroretinitis of the right.

Stevens reported the case of a woman in middle life where the toxaemia was so great as to cause stupor, slow pulse, subnormal temperature and headaches in addition to the more frequent symptoms of failing vision and moderate optic neuritis with central scotoma, vision 4/20 each eye; history of nasal discharge suddenly stopping before onset of symptoms. Recovery followed the opening of the posterior ethmoid and sphenoid.

In 1910 MacWhinnie says that because of the fact that in several of his cases the probing of the sphenoid immediately increased the fundus congestion, he was led to believe that these cases were really the result of absorption of toxic products from this sinus through the lymphatics, although "I am well aware," he says,

"that, so far, there has not been any established relation between the lymphatics of the eye and the sinus other than the very noticeable widening of the perivascular lymph channels in the axial strand, demonstrated first by Schieck pathologically." MacWhinnie reported five cases giving peri-metric charts before and after operation. "Personally," he writes, "I believe it is good practice to open the sphenoid in cases of optic neuritis or choked disc, showing paracentral scotomata in the visual fields, no possible harm being done if there is not an involvement of the sinus, and if it is present we have eradicated one of its etiological factors."

Gradle's views as to the etiology of blindness and the blind spot from accessory sinus disease differ considerably from previous writers. After giving the anatomical relations and blood supply of the optic nerve, in accordance with the teachings of Onidi, Loeb, Vossius, and Gray, he says:

"These anatomic facts explain the course of disease from the accessory sinuses to the optic nerve. The infection, the edema, or whatever may be the disturbing factor, passes from the sinus periosteum through the diploic veins and lymph channels to the orbital periosteum, thence by continuity to the intracanalicular portion of the dura of the optic nerve, or possibly through the periosteal veins or dural veins directly to the central vein of Vossius. If the dura alone is involved, thus causing a pressure upon the periphery of the optic nerve within the canal, the peripapillar bundles alone will be involved and an enlargement of the blind spot will result. If the process extends further and involves the central vein of Vossius, surrounding it by an edema, the neighboring nerve bundles will suffer. These happen to be the papillo-macular bundles and there results a central scotoma. Consequently, I believe that I am justified in stating" (contrary to the teachings of Onidi and Loeb) "that the anatomic relations of the sphenoid and ethmoid cells to the optic canal are immaterial when it comes to a question of optic nerve involvement in accessory sinus disease. The trouble is transmitted by the soft tissues alone."

Shumway reported a unique case and expressed a very interesting theory in 1915. His patient had failing sight in one eye for nine years. The fundus showed pallor of the temporal half of the nerve and there was a horizontal oval scotoma for colors; vision 2/45. Nasal examination showed a necrosing ethmoiditis. Three years later, after a slight improvement, his condition became worse and the writer concluded the case was one of insular sclerosis and advanced the theory that it might have been produced by absorption of the toxins from the purulent focus in the ethmoid cells. Such a theory would explain the similarity in the lesions of retrobulbar neuritis due to intoxications and those found in disseminated sclerosis.

Stark in 1916 calls attention to the similarity of the eye symptoms in accessory sinus disease and multiple sclerosis. "The eye symptoms in multiple sclerosis," he says, "are amblyopia, nerve involvement, muscle involvement, including nystagmus, change in the pupil field of vision. . . . . As in sinus blindness, these symptoms are not all present in any one case, the diagnosis being made by the presence of one or more."

In speaking of the etiology he quotes Aurbach and Brandt, who say that "the relation of multiple sclerosis to retrobulbar neuritis is interesting in so far as the last named affection, in the great majority of cases, in acute as well as in chronic form, is etiologically referable to various intoxications and infections, arousing the suspicion that multiple sclerosis is likewise based on some organized or unorganized poison, crediting the increased frequency of influenza in the last decade with the greater frequency of multiple sclerosis." He also quotes Parsons, who says: "The pathologic condition is suggestive of the presence of a circulating toxin as the cause of the disease." Stark concludes as follows: "The eye symptoms of multiple sclerosis and sinus blindness, which have previously been considered different diseases, are to my mind the same, one being an advanced stage of the other."

It may be of interest to give the usual findings in cases of multiple sclerosis as outlined by Dr. Kampherstein, who describes the eye symptoms in 37 cases, in 23 of which the diagnosis was positive and in the remaining 14 very probable. Most of the cases occurred in young individuals. In 24 there were ophthalmoscopic changes, the most common being temporal pallor, —bilateral in 8 cases, unilateral in 10 cases. There was incomplete optic atrophy in 3 cases; complete bilateral optic atrophy in 1; sector-shaped pallor in 2; an optic neuritis in 1; in 5 there was an absolute central scotoma; in 5

a relative central scotoma; in 3 a central scotoma with peripheral contraction of the field; and in one case green was not recognized in the entire field. Nystagmus was present in 30 cases. Of these, 26 had nystagmus only in extreme positions of the eye, while in two there was marked nystagmus, even in the primary position.

Bradburne reported a unique case of optic neuritis associated with implication of the abducens nerve from sphenoid disease. The patient had occipital headaches and double vision for twelve months. Examination revealed a slight weakness of abduction of the left externus muscle with some loss of vision and blurring of the left disc. This deviation reached a maximum of 14 degrees some weeks later. The use of cocain and adrenalin was followed by a profuse thick purulent discharge from the sphenoidal region and a rapid subsidence of the neuritis. There was, however, occasional blurring of the vision for 9 months and at times pain, but the diplopia cleared up. The author says that "the implication of this nerve" (the left abductor) "assisted the localization of the seat of the mischief, for such could scarcely be anywhere else than at its situation on the body of the sphenoid where it traverses the cavernous sinus alongside the carotid artery." "It is possible," he says, "that in this case the sixth nerve may have had an abnormal relationship to the carotid and instead of lying external to the artery, might have laid on its mesial aspect in contact with the bone."

The uselessness of negative findings is well shown by Caldwell, who reported a case in 1892 of double optic neuritis due to unrecognized ethmoid and sphenoid disease. Loss of vision came on during a sea voyage, being preceded by violent pain first in one eye and then in the other. After being examined by many specialists and treated unsuccessfully in various hospitals for two years, his disease was at last correctly diagnosed, although too late to benefit his vision. The pain, which was paroxysmal, was relieved by removal of the middle turbinate and draining the sphenoid sinus, and there was also a marked improvement in his general health, but both optic nerves had atrophied.

Vail, in 1919, reported three cases of monocular retrobulbar neuritis from ethmoid disease, all with negative rhinoscopic findings. Two of these were due to hyperplastic ethmoiditis and one to a suppurative process. In conclusion he says that in the two cases where "there was no bacterial invasion of the nerve present, there was swelling of the orbital wall of the posterior ethmoidal or sphenoidal cell which pressed the optic nerve in its passage through the optic foramen and caused a strangulation of the nerve at this point. . . . . This compression no doubt produces a transverse optic neuritis which, while not due to bacterial invasion, is nevertheless destructive to vision and is followed by more or less permanent atrophy of the optic nerve. . . . . The nasal disease that produces this phenomenon is a non-suppurative one, hyperplasia of the ethmoids. . . . . The disease should be recognized and operation on the ethmoid performed at once in spite of its being normal in appearance."

The result of delayed surgical intervention is well shown in the report of Schimer, who saw a case of five months' duration with vision right, fingers immediately in front of the eye; the left, with proper correction, fingers at 5 m.; the temporal halves of both discs quite white. As suppuration was found in the accessory sinuses on both sides, the middle turbinates were removed and ethmoids treated. There was slight improvement in the left, but further improvement was impossible as the nerve fibres had already undergone degeneration. An operation on the sinuses when the trouble commenced would, the writer maintained, have stopped the inflammation and saved the vision.

The seriousness of delay and the importance of thoroughness in operating is shown by Risley, who reported a case of marked pathology in a man of 58 who had atrophy of the optic nerve of long standing in one eye and a recent loss of vision to 6/60 in the other. "The nerve was gray-red, opaque, and margins obscured." There was pain in the frontal region and both nares were filled with polypoid masses. On the removal of these a large quantity of pus escaped and vision rose to 6/15. Seventeen months later it dropped to 1/10 and the nose was again filled with polypi. The patient, however, refused any further operative interference and after consulting various specialists, both at home and abroad, eventually became entirely blind, and when examined three years after his first visit had atrophy of both optic nerves.

For referring to me the following cases I wish to express my sincere thanks to the physicians mentioned and also to the house sur-

geons of the Infirmary who have assisted me in every possible way.

The first three cases have been previously published but briefly are as follows:

CASE 1. Miss R. S., 23, referred by Dr. H. B. Chandler on April 12, 1911. Diagnosis: Chronic unilateral retrobulbar neuritis. Nasal examination: Pus about sphenoid. Later developed chronic posterior ethmoid disease. Operation advised but refused. Result: Practically blind in one eye.

CASE 2. Mr. C. J. M., 25, referred by Dr. William J. Daly on November 21, 1913. Diagnosis: Double optic neuritis. Left sphenoid smaller than right. Operation: Removal of left middle turbinate and opening of left sphenoid. Complete recovery.

CASE 3. Miss I. L. P., 21, referred by Dr. F. I. Proctor. Diagnosis: Double optic neuritis. Left eye much worse than right. Operation: Removed left middle turbinate. Complete recovery.

CASE 4. E. G., 25, a machinist, was referred by Dr. Verhoeff at the Infirmary on April 14, 1916, with diagnosis of bilateral retrobulbar neuritis and optic atrophy. History of excellent health excepting a catarrhal trouble of several years' duration. First noticed a fogginess in vision about two months ago. This came on suddenly and was preceded for several days by severe pain about and behind the eyes. Was treated in the Outpatient department on February 28, 1916. Vision 20/50 right and 20/70 left. Disc of right eye apparently normal; left disc paleness of temporal half. Admitted as a house case 3 weeks later, during which period vision right dropped to 10/200; left 2/200. Pupils reacted normally; vessels normal; left disc pale; central scotoma for red and green. Wassermann and nasal examinations negative. Patient discharged unimproved one week later. Re-admitted the following week with vision in right eye now 2/200, left eye shadows. Right disc now also showed pallor on temporal side. Pupils of both were dilated and did not react to light. I first saw the case ten days later, that is, on April 14th, and had him x-rayed; the "left sphenoid was obscured." After a consultation with Dr. Verhoeff it was decided, in spite of the white discs, to attempt to save the remaining eyesight, so both middle turbinates were removed and the posterior ethmoids opened. As no improvement followed this operation both sphenoids were opened ten days later; they were filled with pus and granulations. Four weeks after the operation "both pupils reacted fairly well; fundi unchanged." Six months later vision for fingers was 2 feet right, 3 feet left, which was an improvement over the vision before the operation.

This case well illustrates the difficulty of making an early diagnosis, and the rapidity with which optic atrophy develops. It teaches the necessity of an early operation, even when the findings are negative.

CASE 5. V. C., 28, a machinist, was referred by Dr. MacKenzie of the Infirmary, on March 5, 1917. Diagnosis: Double optic neuritis. He was first seen in the Ophthalmic Outpatient on March 3, 1917, and gave a history of loss of sight in the right eye for two weeks; vision, fingers 1 foot right, 20/200 left; physical, neurological and Wassermann examinations all negative; both pupils dilated, the right responding to light but little and the left fairly well. He was seen by me two days later and admitted as a house case. Vision on admission: right eye, fingers at 1 foot; left eye, 20/200, thus showing a marked loss in the left eye in the past 48 hours. Dr. Quackenboss examined the case and reported "the disc of the right eye pushed forward about 2 diopters; considerable exudate on and about it; the edges lost, the retinal veins enlarged and tortuous. The left disc also showed marked neuritis but no swelling. Although nasal examination was practically negative I at once removed the right middle turbinate and opened the right sphenoid. There was swelling of the mucous membrane,—probably a case of hyperplasia. Within 24 hours the vision commenced to improve and when the patient was discharged 12 days later it was nearly normal. On May 18th, ten weeks after the operation, Dr. MacKenzie reported both visual fields and discs normal, except that the right nerve head was possibly a little paler; vission 20/20 both.

CASE 6. Miss M. C., aged 21, telephone operator, came to the Ophthalmic Outpatient on September 8, 1917. Diagnosis: Unilateral retrobulbar neuritis. She was admitted at once as a house case. History of good health, not subject to colds, but periodic attacks of severe pain over left eye at which times vision had been blurry for a few hours, but never so bad as at present. This attack came on five days ago with

an unusually severe pain over and about the eye. It hurt when she tried to look sideways. The vision was entirely gone for three or four days, and the eye sensitive to pressure. Dr. Quackenboss found a slight blurring of the edges of the left disc. The pupil was enlarged but responded slightly to light. Vision, light perception only. The septum was deflected to the left and the middle turbinate greatly swollen from a subsiding coryza. The septum was resected at once and the anterior end of the middle turbinate removed. Following this the vision improved so that within 48 hours fingers could be made out close to the eye. One week later fingers at 15 feet. The patient unfortunately contracted another severe cold and for ten days the vision was greatly diminished, but thereafter improved, although it never became quite normal. As the swelling accompanying the coryza disappeared it was found that the posterior portion of the left middle turbinate, the location of which it had previously been impossible to determine, was obstructing the opening to the sphenoid and it was removed together with the front wall of that sinus. The pressure on the nerve had, however, caused slight atrophy. Dr. Quackenboss examined the patient on November 8th, two months after the operation, and reported: "Right eye normal; left eye vision 20/30; the optic nerve is pale and shows evidence of partial atrophy." In March, 1919, the patient had some pain and blurriness of the other eye but this cleared up under treatment without impairment of vision. On examination by Dr. Quackenboss on May 10, 1919, the left disc was still paler than the right and there was a certain amount of optic atrophy, although the vision had improved in the past 18 months from 20/30 to 20/20 minus, thus showing that there may be improvement some months after the operation.

Case 7. Mrs. M. J., 37 years old, came to the Ophthalmic Outpatient on September 17, 1917. Diagnosis: Bilateral retrobulbar neuritis. History of severe pain in head for 24 hours, when she noticed that the right eye was blurry; and in three days it was totally blind. One week later similar trouble came on in the other eye so that she had to be led into the Infirmary. She was admitted as a house case and improved under local treatment for 3 or 4 days, then became worse,—no light perception in right eye and fingers barely in the left. Her history pointed toward specific disease, so operation was delayed until the Wassermann report was obtained. This was negative, as were also the neurological, x-ray, and nasal examinations. The right middle turbinate was then removed and the right sphenoid opened. Thickened mucous membrane was found—probably a true case of hyperplasia. The sight in the eye on this side commenced to improve within 24 hours. A week later the left middle turbinate was removed, and the left sphenoid and posterior ethmoid opened. Improvement thereafter was rapid. The patient was examined several times by Dr. Quackenboss, who was able, day by day, to note the changes in the fundi. Four days after the opening of the left sphenoid he reported that there was still marked neuritis. On the twelfth day he noted "marked improvement; neuritis subsiding; edges of discs made out fairly well; vessels nearly normal." Two days later he reported "right eye, neuritis subsiding; edges of disc quite distinct; nerve has slight pallor; left eye, edges of disc fairly distinct; one or two vessels a little twisted." The patient when seen three months later had practically normal vision.

Case 8. Miss H. H., 17 years old, was referred on March 15, 1918, by Dr. Fred M. Spalding of the Infirmary. Diagnosis: Bilateral retrobulbar neuritis. History of very severe pain in head some six weeks ago which was followed by marked bilateral loss of vision. Examination showed blurring of both discs and marked neuritis right. She was referred to the Massachusetts General Hospital as the trouble at first was thought to be due to pituitary disease. Neurological, x-ray, and Wassermann examinations all negative. Vision left, fingers at 3 feet; light perception only in right. Nasal examination negative except a deflection of the septum. This was resected on March 15th and the right middle turbinate removed. Six days later the right sphenoid was opened. No pus or granulations, but a hyperplastic condition found. The patient was discharged in 9 days with vision 20/20 left and 20/30 right. The right fundus still showed a slight neuritis. Two weeks later the antro-nasal wall was broken down and a diseased molar extracted. There still persisted a slight blurring of the disc in the right eye, but on July 9th, some four months after the operation, both

discs were cleared and the vision 20/20 both.

CASE 9. Miss M. C., aged 20, was referred by Dr. Verhoeff. She entered the Infirmary April 6, 1918, with exophthalmos of the left eye. For the past two weeks, following a severe cold, there had been pain and swelling about the left eye. The eyeball was pushed forward and outward; vision 20/20 and fundus normal. There was tenderness over the ethmoid region and a moderate conjunctivitis. A diseased molar was extracted by Dr. Wright. On the 9th I examined her nose, which was negative, but as some sinus disease was suspected she was x-rayed; the plates were negative, however, as were also the physical, neurological, and Wassermann examinations. With the subsidence of the exophthalmos the patient first noticed a fogginess in her vision, and on April 21st, some two weeks after her admission, the fundus on being again examined showed a commencing choked disc. This grew rapidly worse so that within 4 or 5 days her vision dropped to 20/200 and the fundus showed marked engorgement. On April 27th, 6 days after the neuritis was noticed, I removed her left middle turbinate and opened the sphenoid and the posterior ethmoid. The patient improved rapidly and was discharged a week later with vision 20/50. One month later, when the left fundus was normal and the vision 20/20, the other eye commenced to pain and the vision became blurry. Dr. Verhoeff found a marked papillitis, with vision 20/200, so she was re-admitted to the Infirmary and on June 12th I removed the right middle turbinate, which was tightly wedged between the septum and ethmoidal wall, and opened the right sphenoid. Eight days after the operation the patient was discharged with normal vision. She went along favorably for six weeks, when, following a cold, the pain returned about the left eye (the first one affected) and there was diminution of the vision. The left antrum was dark on transillumination, and there was slight blurring of the left disc with vision 20/30; so on July 24th all the posterior ethmoids on the left were exenterated, the opening in the anterior wall of the sphenoid enlarged, and a permanent opening made into the antrum, which, by the way, was filled with pus. Patient discharged a week later with vision normal, which remained so for 4 months, when, following a severe cold, there was some pain in the left eye and a blurriness for two days, but this subsided under local treatment.

This case is unique, at least in my experience, as the optic neuritis of the left eye developed while the patient was under treatment at the Infirmary for the exophthalmos of that eye. The neuritis in the right eye came on some weeks after that in the left had subsided; then there was a recurrence of the neuritis in the left eye some weeks after that in the right was cured. The first operation on the left side was the removal of the middle turbinate, an opening into the sphenoid and the posterior ethmoid cell. This is usually sufficient but was not so in this case. That the optic nerve, while not in relation to the other accessory sinuses, may yet become involved from the toxaemia of the infection, is, I believe, well demonstrated by this case.

CASE 10. Miss M. E., 27, a patient at the Infirmary with neuro-retinitis and choroiditis of the right eye, was referred by Dr. Verhoeff on April 16, 1918, more with an idea of seeing what effect the opening of the sinuses would have on the retina than with the expectation that the vision could be benefited. Ten years ago she had paresis of the right facial but no cause; monthly headaches since a child. About three months ago patient noticed that inner half of field of vision was gone in the right eye. This lasted for about one week, then the other half began to go, so that now she has light perception only. About two weeks ago the eye began to turn out; pupil round, regular and reacts to light; fine floating vitreous opacities; disc swollen and edges not seen; tension normal. The left eye was normal. X-ray of sinuses, Wassermann, neurological, and nasal examinations all negative. On April 20th I removed her right middle turbinate and opened the sphenoid. The membrane was somewhat thickened, but no pus or granulation. Patient was discharged a week later with no improvement. Some 6 or 7 weeks after this the pain in the right side of the face, which she had had occasionally, became constant and of such intensity that acetyl-salicylic acid in 10-grain doses was required nearly every hour. In the region of the posterior ethmoids soft polypoid tissue was found which, on account of the severity of the pain, was suspected of malignancy, but a small portion removed for examination was negative. Although the Wasser-

mann was negative, Dr. Verhoeff suspected specific disease and had given the patient inunctions and potassium iodide for some weeks. On July 10th I cleaned out her ethmoids. Granulations and pus were found. The pain, which had continued up to that time, was entirely relieved and had not returned when seen six months later. This was also true of her periodical sick headaches. The general health was also much better, but the vision was unimproved.

(To be continued.)

Book Reviews.

Symptoms of Visceral Disease. By Francis Marion Pottenger, A.M., M.D., LL.D., F.A.C.P. St. Louis: C. V. Mosby Company. 1919.

In spite of the fact that the modern tendency in medical practice is toward specialization, the author of *Symptoms of Visceral Disease* points out that it must be recognized that the human body is a unit and that diseases cannot be divided into those belonging to special organs, but must be considered in relation to other organs and to the body as a whole. This book attempts to interpret in terms of visceral neurology symptoms which are found in every-day clinical observation of visceral disease. The author emphasizes the importance of the vegetative nervous system and its relation to clinical medicine, believing that the vegetative nerves and the products of the endocrine glands are the medium through which visceral symptoms are expressed.

The book is divided into three main divisions. In the first is discussed the relationship between the vegetative nervous system and the symptoms of visceral disease, with the practical application of the principles of visceral neurology to clinical medicine. The author considers the classification of symptoms of disease, segmentation of the body, viscerogenic reflex, reflexes whose afferent impulses course in the sympathetic and in the parasympathetic nerves, and sympathetic and parasympathetic syndromes.

In the second part, the author has discussed innervation of important viscera, and presents a clinical study of the more common viscerogenic reflexes. In the third section is given a brief review of the vegetative nervous system. This book emphasizes the importance of more accurate clinical observation and interpretations, with due consideration of the patient as well as of the disease.

The Health Officer. By Frank Overton, M.D., D.P.H., and Willard J. Denno, M.D., D.P.H. Philadelphia and London: W. B. Saunders Co. 1919.

The work of the public health officer covers a wide field of preventive medicine, involving a great variety of duties. This volume, "The Health Officer," describes these activities and explains how and why the work should be organized and carried out. The relation of the public health officer to the boards of health, to physicians, social agencies, and the public is a leading one. His qualifications are many; he must undertake to suppress and prevent communicable diseases, to supervise laboratories, water supplies, and public buildings, to record vital statistics, to undertake the medical supervision of school children and the correction of their defects; to conduct infant welfare work and develop educational measures. This book outlines the methods which have been found to be most effective in coping with his work, describes the various diseases and unsanitary conditions with which it is necessary to deal, and explains the scientific principles of preventive medicine. It is written in simple and untechnical language, and although designed primarily for public health officers, it will be found valuable also to college students, public health nurses, members of boards of health, social workers, and teachers.

Chemistry for Nurses. By Fredus N. Peters, A.M., Ph.D. St. Louis: C. V. Mosby Company. 1919.

This textbook, *Chemistry for Nurses,* is an unusually interesting, scientific, and truthful exposition of the fundamental principles involved in the science of chemistry. The book has been written primarily for nurses, but it is so clearly and simply written that it will be found of general interest to others and of great practical value. The author has tried to avoid technical terms as far as possible, although chemical theory has been introduced when necessary for an understanding of phenomena. In an introductory chapter are discussed the ancient theories of matter and the reasoning of ancient philosophers, which are contrasted with modern ideas and experimental methods. The composition and uses of water, hydrogen, oxygen, ozone, and hydrogen dioxide, common salt and sodium, chlorine and the halogen family, carbon, sulphur, nitrogen, silicon, and magnesium, and the properties and uses of metals, including aluminum, copper, lead, and iron, are considered. In addition to substances which can be made useful, a careful study is made of other elements which are poisonous. In the appendix are added various tables which will be found helpful. The book is amply illustrated, and systematically presented.

THE BOSTON
Medical and Surgical Journal
Established in 1812

An independently owned Journal of Medicine and Surgery published weekly under the direction of the Editors and an Advisory Committee, by the BOSTON MEDICAL AND SURGICAL JOURNAL SOCIETY, INC.

THURSDAY, OCTOBER 16, 1919

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An editor will be in the editorial office daily, except Sunday, from twelve to one p.m.

Papers for publication, and all other communications for the Editorial Department, should be addressed to the Editor, 126 Massachusetts Ave., Boston. Notices and other material for the editorial pages must be received not later than noon on the Saturday preceding the date of publicaton. Orders for reprints must be returned in writing to the printer with the galley proof of papers. The Journal will furnish free to the author, upon his written request, one hundred eight-page reprints without covers, or the equivalent in pages in the case of articles of greater length.

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WORLD ACTIVITIES OF THE RED CROSS.

PERHAPS no other report contains so complete a picture of the activities of the Red Cross throughout the world as the *Revue Internationale de la Croix-Rouge*, a recently organized French publication of which only two or three numbers have as yet been printed. It surveys the work of the Red Cross in various departments and in many countries. The Red Cross has protected prisoners, protested against military outrages, made international appeals in the interest of humanity, and has devoted itself to the alleviation of suffering all over the world. Thousands of Russian prisoners have been protected and aided in adjusting themselves to old methods of life; prisoners in Germany, Lithuania, Galicia, and Roumania are looking to the Red Cross as an active agent in their deliverance. The Red Cross has appealed to Italy, Portugal, and Japan, for the repatriation of civil prisoners and the improvement of their condition until released. Steps have been taken for the hospitalization in Switzerland of a group of ex-military Bulgarians coming from Germany. Bulgarian prisoners in France have been assisted and lists are being completed of civil prisoners. The Red Cross has also secured information about civil prisoners in China. These and other activities illustrate the international service rendered by the Red Cross.

Publications from different countries give evidence of the wide humanitarian purpose and achievement of the Red Cross. In Frankfort, the foreign section of the Red Cross has undertaken important services. It has cleared up the mysteries surrounding thirty-five thousand men, established a registration of the new allied prisoners in German camps, and has transmitted messages to the civil population occupied by the Germans. Communications have been sent between children separated from their parents who remained in invaded districts.

The Red Cross report from Denmark mentions chiefly the help given during the recent influenza epidemic. *La Cruz Roja* of Spain relates the work undertaken at the time of the inundations at Malaga in November, 1918. In France, the *Croix-Rouge* deals chiefly with the repatriation of prisoners and protests against German offences. The record of the Scotch section of the Red Cross describes the ambulance service which it has maintained. It established a base hospital at Rouen and furnished the equipment for more than 6,000 beds. Since 1914, the mileage of this section has been about 4,000,000, and the number of soldiers transported, 1,700,000.

The English Red Cross Society spent more than six and one-half million dollars annually. Its service included the maintenance of ambulance automobiles in France, Salonica, Russia, Egypt, and Mesopotamia; hospital trains in France, lazarets and first aid stations near the fields of battle. The English staff consisted of about one thousand workers; in October, 1918, the organization had in England 1,666 hospitals with eleven others accepted and used by the Admiralty, besides five general hospitals in France, three base hospitals, and fourteen small special hospitals. The Canadians maintained twenty-one hospitals in England. The English Red Cross rendered noble service to the Italians in sections evacuated by the Austrians.

The Japanese Red Cross cared for hospitals opened at Vladivostock. A Montenegrin Red Cross was maintained at Geneva during the war. A Swedish Red Cross coöperated with the Norwegian and Danish organizations in aiding prisoners in Russia. In Switzerland, considerable work was done by the Rote Kreuz in combating influenza, and, aided by funds from the American Red Cross, stations were opened in the Bernese Oberland. The Russian Red Cross put at the disposal of the armies of the southwest twenty-two hospitals of two hundred beds each, two smaller ones of five beds, two field hospitals, five ambulances, and a staff; the number of hospitals was later increased to one hundred and thirty, with numerous staffs. The fact that there were 1,221,276 patients in these hospitals gives some evidence of the splendid work accomplished in that country.

There are forty Red Cross national organizations at the present time: two in North America, eight in Central and South America, twenty-seven in Europe and the Red Crescent of Turkey, and two in Asia. The Red Cross has devoted itself to the relieving of human suffering in the past; in the future it will endeavor to be of even greater service—in the prevention of disease.

MEDICAL EDUCATION IN NEW YORK.

IN order to promote medical education in New York and in this country, the New York Association for Medical Education, with a fund of fifty million dollars, will endeavor to make New York a leading city in the world of medicine. The teaching facilities, clinical resources, and eminent physicians and surgeons of that city are among the best in this country, and it is hoped that by coördination of these resources American medicine may be considerably advanced.

The purpose of this organization will be to improve and amplify the methods of undergraduate and graduate medical teaching; to perfect plans for utilizing the vast clinical material which there is in New York City for teaching purposes and to make use of teaching talent now unemployed; to bring about a working affiliation of the medical schools, hospitals, laboratories, and public health facilities of the city to the end that the best interests of medical education may be conserved; to initiate the establishment of a medical education foundation in New York whereby funds may be secured to meet the financial requirements of all forms of medical education and investigation.

The New York Association for Medical Education will include a general membership of physicians and surgeons, both allopaths and homeopaths, and will be governed by a corporation of one hundred and fifty men, including medical teachers, medical men with hospital appointments, those affiliated with hospital teachers of ancillary sinuses, and medical investigators. From this governing group of men and elected by it there will be a board of fifteen trustees, to direct the teaching and manage the business affairs. The officers of this organization include the following men: President, Dr. Wendell C. Phillips; first vice-president, Dr. George D. Stewart, president of the New York Academy of Medicine; secretary, Dr. Haven Emerson, a former commissioner of health of the City of New York; and treasurer, Dr. Arthur F. Chace, superintendent of the Post Graduate Medical School and Hospital.

The war was, perhaps, partly instrumental in the organization of this movement. Before 1914, many doctors went to Austria and Germany for post-graduate medical education, believing they could gain something from the clinics of these countries which they could not get at home. During the war, London became the centre to which many Americans went for post-graduate work and studied at the Royal Society of Medicine and the Royal College of Surgeons. The London medical organization which is to direct this work in the future is the Association for Post Graduate Medical Instruction. Although Americans will still go to London for post-graduate work to some extent, there is no reason why New York should not afford equal opportunities. The Post Graduate Medical School in New York, which is connected with the Post Graduate Hospital, has the largest registration in its history for the coming fall term, with a total of more than a thousand students.

At the present time, medical colleges are beginning to recognize the need of advanced study and practical experience beyond the limits of undergraduate study, and it is probable that before long the medical course may be changed to five years. The Association for Medical Education will greatly assist this future development. In time it will have a post-graduate medical school and hospital in which will be brought

together all the teaching resources of New York. Coöperation with other medical schools in the country and in great Britain will make it possible for students to learn what is being done in other cities, and may result in drawing English students here rather than sending Americans to London. New York has many factors to make for the success of this project, among them more than a hundred hospitals and numerous clinics and dispensaries. There are fifty or sixty general hospitals and the special hospitals include those devoted to women, babies, tuberculosis, mental and nerve cases, the eye and ear, cancer, skin diseases, scarlet fever, and diphtheria, orthopedic work, dentistry, and insanity. There is also an osteopathic infirmary, a floating hospital, and one for chronic diseases. Among the teaching institutions are the Columbia College of Physicians and Surgeons, Cornell Medical College, Bellevue Hospital Medical School, and the Long Island College Hospital. The post-graduate medical school of the Polyclinic Hospital has been used for army purposes, but it is believed that it will probably be reorganized by 1920.

The New York Association for Medical Education will bring together all the facilities which that city offers for the advancement of medical education; it will keep in close touch with medical activities and progress in all parts of this country, and will probably make some arrangement with a similar organization in London. If the plans which the Association has made can be fulfilled, New York will become one of the leading medical centers of the world.

THE NEED OF MEDICAL MISSIONARIES IN CHINA.

In spite of the efforts which are being made by American and other missionary boards, by the medical schools of Harvard, Yale, and the University of Pennsylvania, and by the China Medical Board which was organized by the Rockefeller Foundation, there is still an urgent need of a greater number of medical missionaries in China. The *Journal of the American Medical Association* has reviewed the status of medical education and practice in China. There are twenty-six medical schools, five of which are at present members of the Association of Medical Colleges of China; only colleges which provide a four-year medical course and which require for admission two or more years of college work, including courses with laboratory work in physics, chemistry, and biology, are admitted to this association. The China Medical Board of the Rockefeller Foundation is erecting at Peking and Shanghai two practically new medical schools, including premedical departments. The Foundation is aiding other medical schools in China,—the Shantung University School of Medicine at Tsinan, The Hunan-Yale College of Medicine at Changsha, and the medical schools of Nankin, Canton, Soochow.

Although provision is being made for adequate medical education in China which will in time develop and fulfil the needs of the country, the actual medical practice in China today is not sufficient to care for the population and to prevent China from being the source of many of the epidemics which may sweep over the entire world. For the estimated population of more than 400,000,000 people, including Manchuria and Mongolia, there are only 2,000 scientifically trained physicians. During 1917 there were in China 351 foreign medical missionaries who had assisting them 212 foreign physicians; these physicians cared for about 120,000 hospital inpatients during that time, and still the medical service was not adequate. The medical practice of the entire world must combine to check disease wherever it is found—there is a great need and a great opportunity in China.

OBSTETRICAL DEPARTMENT AT CARNEY HOSPITAL.

It will be of interest to the profession to know that an Obstetrical Department has been opened at the Carney Hospital in South Boston under the direction of the Gynecological Staff. It has been equipped with all modern appliances, and will afford excellent facilities for the treatment of all obstetrical emergencies. Private rooms, private wards, and a general ward are now ready for the reception of patients. The service of a pre-natal clinic, which will be held every Thursday afternoon at three o'clock at the Out-Patient Department, will be appreciated.

MEDICAL NOTES.

Recurrence of Influenza Epidemic.—At a recent meeting held by the women physicians who are holding an international conference in New York, it is reported that Dr. William H. Park, of New York, stated that he believed that there would not be a recurrence of the influenza epidemic this winter. He is of the opinion that although we have not yet discovered a specific vaccine to protect us against influenza, we can find a moderate protection against pneumonia, bronchitis, and respiratory diseases in general from vaccination with several fixed strains of organisms found in respiratory diseases.

Post-Graduate Teaching in London.—It has been announced in the *British Medical Journal* that the Fellowship of Medicine has decided that the emergency course which was instituted in London last spring should be continued. It is hoped that in time this may become a permanent organization, with a house and perhaps a hospital of its own. This course has been of great benefit to medical officers of the Dominion and of the United States, and also to many holding territorial, special reserve, or temporary commissions.

Cholera in Petrograd.—A recent report from Stockholm states that from two to three hundred persons are dying daily in Petrograd from cholera. Sanitary conditions are becoming more and more intolerable, and many hospitals have been closed because of lack of medicines and food. The Government has issued a decree ordering all hospitals managed by Sisters of Mercy to discontinue their work.

Drug Prices.—The following quotations of drug prices have been published recently: Domestic colors are active. While a consignment of Swiss colors was received, it did not supply the demand, because the entire lot had been sold ahead. Aniline oil and salt advanced, and the improvement in the oil caused firmer conditions in the paranitraniline market. Albumen is lower.

The essential oil market is easy. Lemon oil is lower. Menthol and peppermint oil are higher on reports of scarcity and holders are loath to sell.

The situation in domestic medicinal drugs is becoming acute and prices are still tending upward. Factories that were handicapped by the strike of employees recently are still short of powdered crude drugs, owing to the shutdown of drug mills, but the strikes are practically settled and no further delays are anticipated. Tartaric acid and phenolphthalein are lower.

Quinine is decidedly firmer. Menthol and camphor are higher. Glycerine is easier. Quicksilver is sharply higher. Oil of peppermint is stronger. Senna is tending upward. Botanical drugs are not so active. American colors are in good demand both for export and domestic use. Bright colors are wanted in the Far East. Chromes are the principal feature of the local market. Shipments of phenol are being made at Government prices. Aniline oil and salt are higher. Few shipments of intermediates are being made on spot orders owing to the scarcity of these coal-tar products.

There were few changes in the essential oil market, but there is an undercurrent of strength. Short flower crops and labor troubles have caused a limited production of volatile essences, and prices are likely to advance further.

Pronounced weakness was apparent in the oil market, following the declines in vegetable oils, last week. Purchases are being made only for immediate needs. Linseed, cottonseed, cocoanut, peanut, and soya bean oils all display weakness and prices have been cut sharply.

In heavy chemicals caustic- soda and soda ash are in less demand for export owing to the exchange situation. Potash salts are firmer and there is an increasing scarcity. Many acids are difficult to obtain for spot delivery and producers are booked ahead, especially for sulphuric. Bleaching powder is firmer.

War Activities of the Rockefeller Institute for Medical Research.—The following letter of appreciation of its activities during the war has been received by the Rockefeller Institute for Medical Research from Merrite W. Ireland, surgeon-general of the United States Army:

"During the war, which is now happily past, your Institute proved to be one of America's strongholds. I am informed that from the beginning to the end of hostilities the entire institution was placed by you at the disposal of the War Department and that you did work of the greatest value, not alone for the Medical Department but for the Chemical Warfare and Air Service; that your hospital as well as your

laboratories became in effect as much a part of the army as the hospitals and laboratories established by the War Department in our cantonments.

"I have also been informed that this great work, extending over the whole period of our participation in the war, was paid for entirely out of your own funds, and was without further support from the government than the routine payment of salaries of such members and assistants of the Institute as became part of the Medical and Sanitary Corps.

"I thank you for your work of patriotism and your generosity in placing so fully at the disposal of the Medical Department your great and productive facilities for research, for teaching, and for the care of the sick."

CHIROGRAPHY OF PHYSICIANS.—The Kansas State Board of Health bulletin for July calls attention to a fact which is only too true—that the chirography of physicians is so illegible that very few of the names of the A. E. F. medical officers could be read with certainty. It is to be remembered that carelessness in this respect leads to difficulties in filing, and a baby may lose its birthright because the physician failed to write his name clearly.

VISITING NURSING IN NORTH DAKOTA.—The State Board of Health of North Dakota is making a survey of the nursing resources of the State. The legislation of 1919 provides for the physical examination of school children and the employment of a nurse, and a questionnaire is being sent to all communities in order to discover the present status of nursing work and the number of nurses that will be needed.

APPOINTMENT OF MME. CURIE.—Mme. Curie, one of the discoverers of radium, has been appointed professor of radiology in the Warsaw University.

BOSTON AND MASSACHUSETTS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending September 27, 1919, the number of deaths reported was 178 against 992 last year, with a rate of 11.66 against 65.95 last year. There were 35 deaths under one year of age against 68 last year.

The number of cases of principal reportable diseases were: Diphtheria, 83; scarlet fever, 19; measles, 33; whooping cough, 9; typhoid fever, 2; tuberculosis, 43.

Included in the above were the following cases of non-residents: Diphtheria, 9; scarlet fever, 3; typhoid fever, 1; tuberculosis, 4.

Total deaths from these diseases were: Diphtheria, 2; whooping cough, 1; tuberculosis, 19.

Included in the above were the following non-residents: Tuberculosis, 3.

Influenza cases, 21; influenza deaths, 3.

RED CROSS APPOINTMENT FOR DR. EMERSON.—Dr. (Major) Kendall Emerson of Worcester has been appointed Acting Medical Director of Foreign Operations by the Red Cross. He recently sailed for Paris, where he will have headquarters, and serve as Medical Advisor in the General European Program of Public Health and Sanitation. He was accompanied by his family and will remain there at least one year.

Dr. Emerson served with the Harvard Surgical Unit from November, 1916, to December, 1917, in the British service. He entered the American service in January, 1918, and was assigned to the orthopedic division in the Surgeon General's office in Washington. In June, 1918, he was given charge of the amputation service at the Walter Reed hospital. In January, 1919, he sailed for Siberia as one of a special commission sent by the Red Cross to study conditions there. Shortly after his return he received his present appointment.

APPOINTMENTS AT WORCESTER CITY HOSPITAL.—Dr. Ernest L. Hunt (Harvard 1902) has been appointed Director of Surgical Services, and Dr. Edward B. Bigelow (Harvard 1904) has been appointed Director of Medical Services at Worcester City Hospital.

Dr. Hunt and Dr. Bigelow are both enthusiastic students of medical progress and experienced laboratory workers. Both will give full time to the service of the hospital. It is expected that the addition of a progressive surgeon and a progressive physician as full time continuous service advisors and instructors of the internes and junior members of the visiting staff will make for a better service and be worth the cost. The hearty coöperation and assistance of the senior members of the visiting medical and visiting surgical staffs seems assured.

APPOINTMENT OF DR. HUGH CABOT.—Dr. Hugh Cabot of Boston has been appointed chief surgeon of the University of Michigan. This university requires its professors to give up their private practice and devote their entire energy and interest to the duties devolving upon them as professors in the university and as state officers.

Dr. Cabot has held many positions of importance in this city. At present he is clinical professor of G. U. surgery at the Harvard Medical School, chief surgeon of a surgical service at the Massachusetts General Hospital, and director of clinics of the State Board of Health. He received his medical degree from Harvard Medical School in 1898, and later was made a fellow of the American College of Surgeons. In 1916, Dr. Cabot went to England with the Harvard Unit and was Officer in Command of General Hospital 22, B. E. F., with the rank of lieutenant-colonel. He was made a companion of the Order of St. Michael and St. George in recognition of his work with the British forces at the front. Dr. Cabot returned to this country last February. It is expected that he will not begin his new duties until the first of January.

WOMEN PHYSICIANS IN BOSTON.—The following women physicians, who have been holding a medical conference in New York, were the guests of the Boston Equal Suffrage Association at the Chilton Club on September 27, and later visited Harvard, Radcliffe, and Wellesley colleges:

Dr. Mary Gordon, Dr. Christine Murrell and Dr. Constance Long, London, England; Dr. Frances Johnston, Edinburgh, Scotland; Dr. Alice Armand-Ugon, Montevideo, Uruguay; Dr. Alicia Moreau, Argentine; Dr. Louise Isachsens, Dr. Kristine Munch, Dr. Dagny Bang, and Dr. Regine Stang, Christiania, Norway; Dr. Marie Feyler and Dr. Natalie Wintsch-Maleef, Lausanne, Switzerland; Dr. Clella Potter, Utrecht, Holland; Dr. Clella Lollini, Rome, Italy; Dr. Marguerite Giboulot and Dr. Thuiller-Landry, Paris; Dr. Yvonne Pouzin, Nantes; Dr. Anna Moutet, Lyons, France; Dr. Alma Sundquist, Stockholm, Sweden; Dr. Tomo Inouye, Tokio, Japan; Dr. Radmilla Lazarewitch, Washington Legation of Czecho-Slovakia; Dr. Ellen Burt Sherritt, Dr. Helen MacMurchy, Dr. Anna Young, Dr. Rosamond Leacock, and Dr. Mary E. Crawford, Canada.

INFLUENZA IN LAWRENCE.—Two cases of influenza, neither of which is considered serious, have been reported from Lawrence.

APPOINTMENT OF DR. VICTOR C. JACOBSON.—Dr. Victor C. Jacobson, resident pathologist of the Peter Bent Brigham Hospital, has been appointed assistant professor of pathology in the University of Wisconsin.

POSSIBILITY OF INFLUENZA EPIDEMIC IN MASSACHUSETTS.—It has been reported that Dr. Bernard W. Carey, director of the Division of Communicable Diseases of the State Department of Health, has expressed the opinion that there will not be an epidemic of influenza this season. Up to September 24, there have been reported one hundred and forty-four cases from different sections of the State; during the same month last year there were thousands of cases.

Dr. Carey believes that there is little to fear provided individuals follow strictly the ordinary precautions and rules of health. He advocates plenty of fresh air and sunshine, nourishing food, and at least eight hours of sleep each night. In case there should be an epidemic, the State Health Department is prepared to meet it. For eight months it has been gathering data which will aid in meeting an epidemic if it recurs. A survey has been made of the available equipment in every city and town in the State, and the number of local nurses and doctors, the number of beds in the hospitals, and names of health and other officials and organizations whose assistance would be of value have been recorded.

GIFT TO LAWRENCE GENERAL HOSPITAL.—The sum of fifty thousand dollars was bequeathed to the Lawrence General Hospital in the will of the late Charles H. Tenney.

INFLUENZA IN BOSTON.—Twenty-one new cases of influenza and three deaths were reported to the Boston Health Department during the week ending September 27. During the corresponding week last year there were six hundred deaths, and probably about one thousand cases.

NEW ENGLAND NOTES.

MAINE ANTI-TUBERCULOSIS SOCIETY.—At the annual meeting of the Maine Anti-Tuberculosis Society held in Portland on September 24, Dr. Eugene W. Kelley of Boston spoke on the advantages of open-air schools.

Dr. C. P. Merrill of Bangor, president of the Society, reported a membership of about eight hundred, an annual income of from nine thousand to twelve thousand dollars, and a contemplated expenditure of thirty-five thousand dollars during the coming year.

The following officers were elected: President, Dr. E. D. Merrill of Foxcroft; vice-presidents, Dr. S. J. Beach of Augusta and Henry Richards of Gardiner; secretary, A. J. Torsleff of Bangor; and treasurer, Carl E. Danforth of Bangor.

Correspondence.

UNPRINTED ITEMS BY SIR THOMAS BROWNE.

Mr. Editor:

This writer is cherished by so many readers that attention should be called to an article in the (London) *Times'* Literary Supplement for Sept. 9, 1919, p. 470, which may be seen in any of the large libraries. This describes the newly-discovered contents of a manuscript book by the second of the seven daughters of Dr. Browne, to whom she read "at nights" an appalling number of volumes therein listed. It contains the earliest of his known compositions and his only poem, "Upon a Tempest at Sea." Everyone interested in tuberculosis can read with profit a fragment—"Of Consumptions"—on the theme that this alone of the great diseases is nowhere praised, although "He that Prays against tormenting diseases or sudden death hath his Lettany heard in this disease, which is one of the Mercyfullest executioners of Death."

ALFRED ELA.

SOCIETY NOTICES.

SUFFOLK DISTRICT MEDICAL SOCIETY.—A stated meeting of the Society will be held at the Boston Medical Library on Wednesday, Oct. 29, 1919, at 8.15 P.M.

1, Business: Election of Nominating and Auditing Committees.

2. There will be three fifteen-minute papers:

"Types of Diseased Conditions Most Frequently Seen in the Teeth and Their Diagnosis," Leroy M. S. Miner, M.D., D.M.D.

"Teeth from an Orthopedic Point of View," Robert W. Lovett, M.D.

"The Relation of the Teeth to the General Health," Charles H. Lawrence, Jr., M.D.

It is hoped there will be a general discussion. Guests will be welcome at the second part of the meeting, which will begin about 8.45 P.M.

JOHN BAPST BLAKE, M.D., *President*,
GEORGE GILBERT SMITH, M.D., *Secretary*.

THE NEW ENGLAND WOMEN'S MEDICAL SOCIETY will meet in the Boston University building, Boylston Street, corner of Exeter, on Thursday, October 16, at 8 P.M. This meeting will take the form of a memorial to Dr. Sarah Bond Frasier. Different aspects of her life and work will be presented by the following speakers: Dr. Anna Richardson, Dr. Hannah G. Myrick, Dr. Marian Nute, Dean Bertha M. Boody, and Mrs. A. W. Goodnow.

ALICE H. BIGELOW, M.D., *Secretary*.

NOTICES.

CENSORS' MEETING.—The Censors of the Suffolk District Medical Society will meet for the examination of candidates at the Medical Library, No. 8, The Fenway, Thursday, Nov. 6, 1919, at four o'clock.

Candidates should make personal application to the Secretary and present their medical diploma at least one week before the examination.

The Secretary will be at his office daily between 4 and 5 P.M.

GEORGE GILBERT SMITH, *Secretary*,
352 Marlborough Street.

THE TRUSTEES OF THE MASSACHUSETTS GENERAL HOSPITAL invite the members of the medical profession to attend the Ether Day Address by Dr. Richard C. Cabot, on Oct. 16, 1919, at 4 o'clock.

MARRIAGE.

DR. HAROLD QUINCY GALLUPE, of Everett, married recently Miss Janet Gladys Lyon, daughter of Mr. and Mrs. George I. Lyon of Hingham. Dr. Gallupe is a graduate of Tufts College, 1911, and Harvard Medical School, 1918.

RECENT DEATHS.

DR. AUGUST HOCH died recently of nephritis in the University Hospital in San Francisco. Dr. Hoch was born at Basle, Switzerland, fifty-one years ago. He was graduated from the University of Pennsylvania and later studied at Johns Hopkins University. He became a member of the staff of the McLean Hospital in Boston, and later became first assistant at the Bloomingdale Sanitarium. For seven years Dr. Hoch was director of the Psychiatric Institute on Ward's Island, New York.

DR. THOMAS I. DEACON died recently, after an illness of two years, at the home of his father in Cambridge. Dr. Deacon was born in Brooklyn, New York, thirty-seven years ago. He was graduated from the Tufts Medical School in 1896, and until last May, he practiced in Boston. He was a member of the Massachusetts and the American Medical Societies.

PROFESSOR ALEXANDER MACALISTER, F.R.S., professor of Anatomy in the University of Cambridge, died, at the age of seventy-five years, on September 2.

DR. C. A. MERCIER died on September 2, at the age of sixty-seven years. Dr. Mercier was a physician for mental diseases at the Charing Cross Hospital.

DR. WILLIAM SMITH GREENFIELD, Professor of Pathology and Clinical Medicine in the University of Edinburgh from 1881 to 1912, died recently.

DR. ALFRED LAVIGNE, for many years a practising physician in Lowell, died recently at the home of his nephew in Nashua, New Hampshire, at the age of seventy-nine years.

DR. JULIET H. SEVERANCE, the first woman in the United States to receive a medical degree, died recently at the home of her daughter in New York City. Dr. Severance was born at De Ruyter, New York, on July 1, 1833. She studied with a physician for three years and then went to New York City where she received her medical degree in the year 1858.

DR. NEWELL SILL JENKINS, an American dentist, died recently in Havre, France, at the age of 78 years. Dr. Jenkins was born on Cape Cod, Massachusetts. He practised for 40 years in Germany and for five in France. Dr. Jenkins invented the porcelain method of filling teeth.